

ABSTRACT

An iterative system for performing carrier phase tracking of symbols using a serial turbo decoder. Estimates of a buffered block of symbols are provided by a serial turbo decoder. Optionally, reliability metrics for the estimates are provided as well. Responsive to this information, a tracking loop module determines derotation phases for each of the symbols in the buffer. A symbol derotator derotates each of the buffered symbols in the block by its corresponding derotation phase. The derotated symbols are stored back in the buffer. The process may repeat itself for a prescribed number of iterations, after which the serial turbo decoder provides estimates of the underlying source bits.